



MISSOURI BOTANICAL GARDEN

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GEORGE ENGELMANN BOTANICAL NOTEBOOKS

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coarse rugæ or pitings, which, however, may be due to weathering.

Dimensions.—Length, 0.20 of an inch; width, 0.18. The *Eleacrinus Kirkwoodensis* is nearly allied to *E. (Pentremites) melo*, from which it is distinguished by its much smaller size and less deeply excavated base. It also occupies a higher geological position. Occurs in the St. Louis Limestone (Carboniferous) on the Pacific railroad near Kirkwood, St. Louis county, Missouri.

8

1876
Volar auratus sp.

Monte Diablo, California.

738 State Survey

736



0
cm

1 2 3 4 5 6 7 8 9 10

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9755

circumstances prevented me from obtaining more than a few crystals, which are now deposited in the collection of the Smithsonian Institute; a few others are also in the hands of members of the party. We were travelling at the time by forced night marches with nearly worn out animals, seeking to gain a spring of water in a distant range of mountains. This desert was then entirely unexplored. I have but little doubt that more interesting materials are to be found at the same point.

The mountains of the former Territory of Utah promise a rich yield to the mineralogist. We know already of gold and silver ores in the east, west and south part of that district; of copper and lead ores in the south, and I have discovered the latter also in the centre of it; of specular iron ores and native sulphur in the Rocky Mountains and near Little Salt Lake; of rock salt in the mountains south-east of Utah Lake; of native alum near Salt Lake; of various other salts in the deserts; and of silicates, composing the granites, porphyries, diorites, trachytes, and lavas, nearly over the whole area.

MISS
GEO



0 1 2 3 4 5 6 7 8 9 10
cm

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838 Califor
State Survey
Brown 1866

I. auratum n. sp.

Febr 25 1866

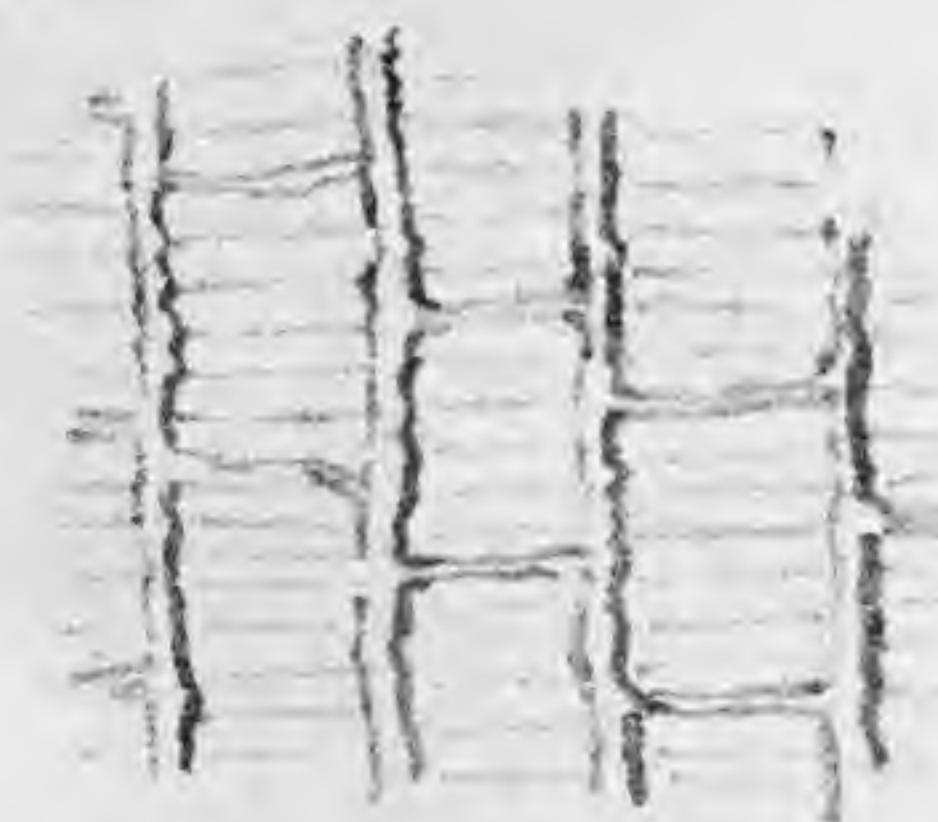
Montebello, Calif., shady brooks
Sept 25. 1861

×60

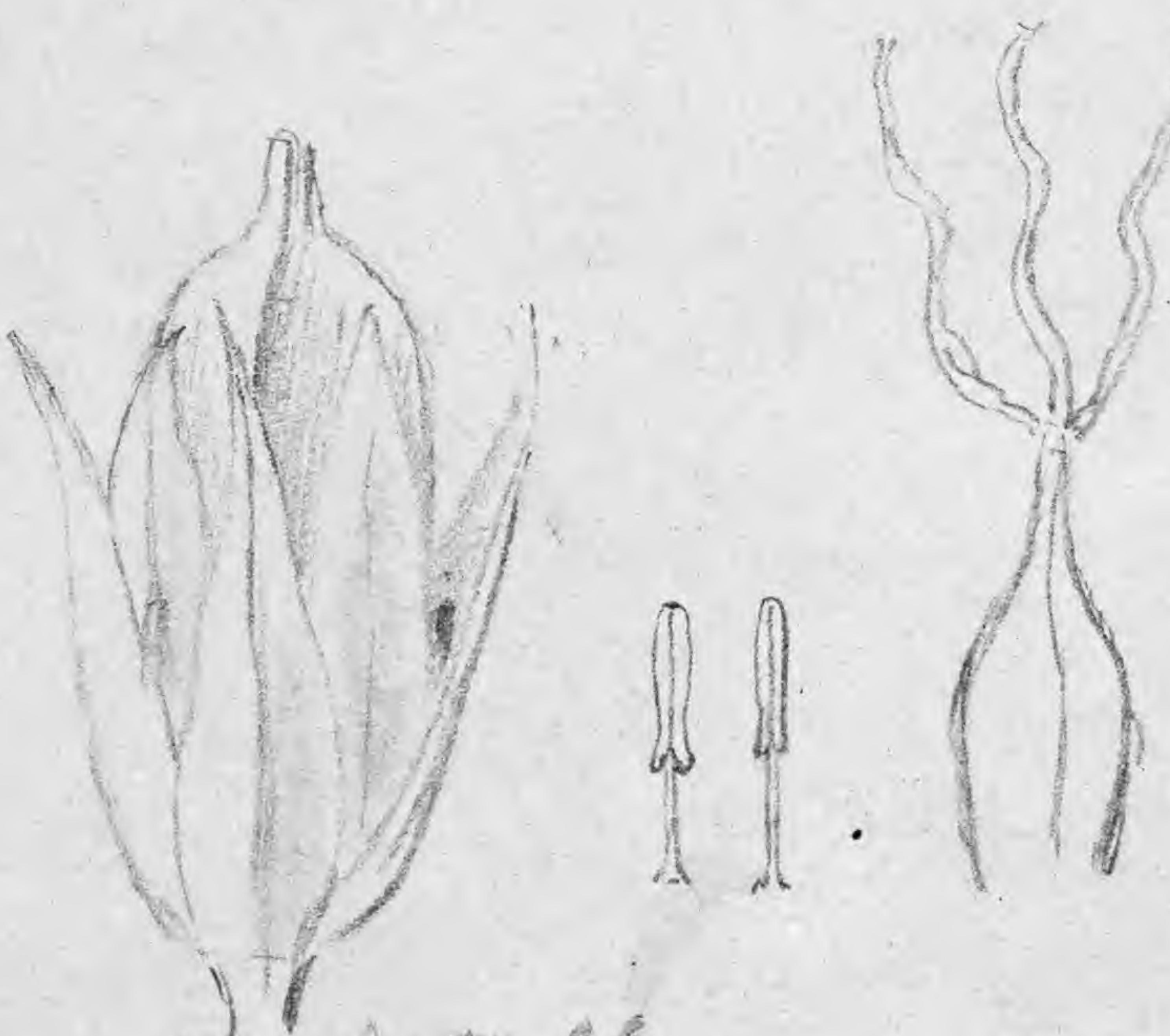


7.9 mm visible

×150



regularly indistinctly
ribbed; thin,
exterior ones more
evident; nerves
more about nerves,



placenta
filiform, only a
lower half of
valve

margin not auripulate



0 1 2 3 4 5 6 7 8 9 10

cm

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M. W. ALEXANDER,

SOUTH-EAST CORNER FOURTH AND MARKET STREETS

ST. LOUIS.

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0 1 2 3 4 5 6 7 8 9 10
cm

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6026

I. xiphoides
~~mettong~~

July 26 1867

Herb. No. 94

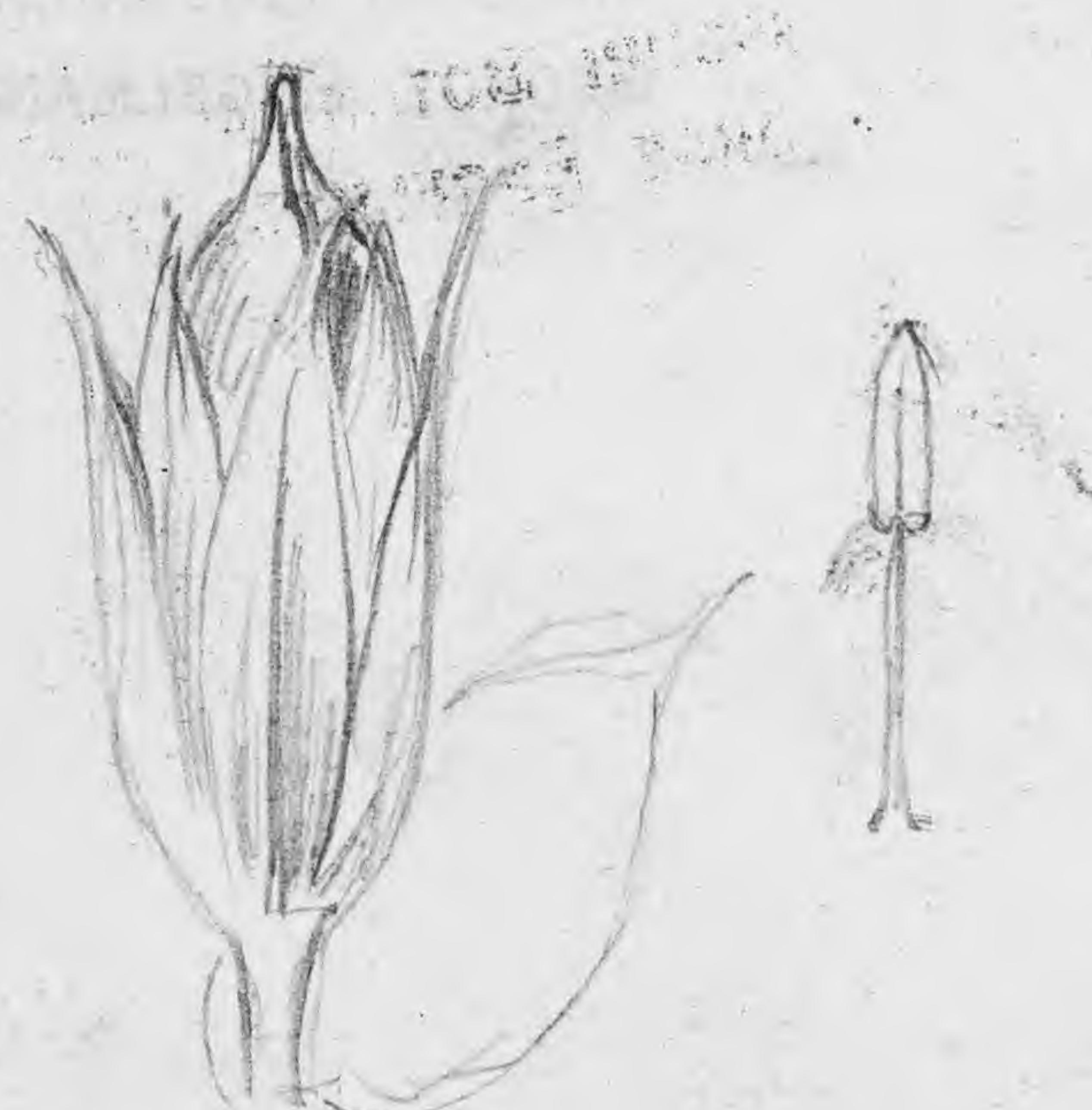
Yosemite valley
very common in large tufts on gravelly soil
near water

H. Bol. June 1867

x60



6-7 ribs
apex rounded



0 1 2 3 4 5 6 7 8 9 10

cm

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ALEX. LEITCH,
APOTHECARY & PHARMACEUTIST

Marble Building Cor. Fourth & Olive Sts. St. Louis, Mo.

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0 1 2 3 4 5 6 7 8 9 10

cm

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Scat of leaf

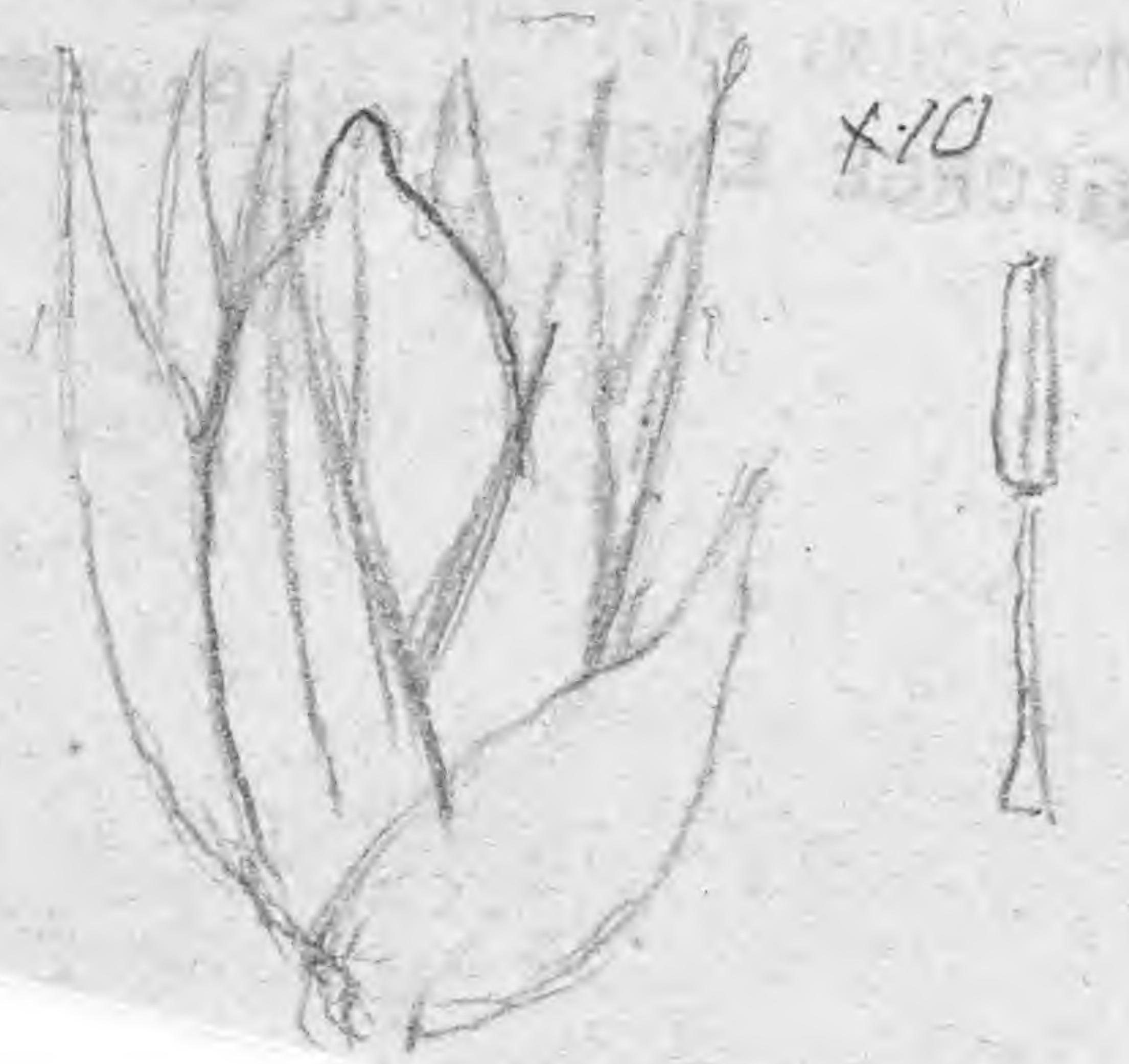
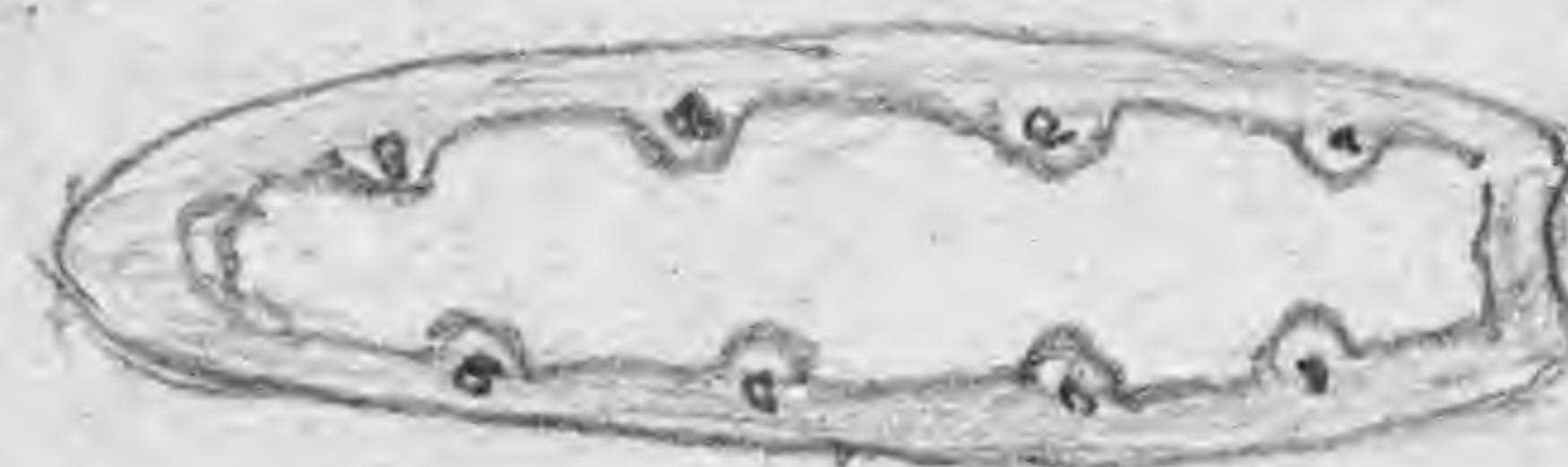
Juncus xiphoides

June 14 1881

Oregon Hall, "

N. 548

x 10



x 10



other flower
creased above
6 stamens
filament much
shorter than
anthers

a form of *J. xiphoides*,
var *tridentatus*



0 1 2 3 4 5 6 7 8 9 10

cm

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Metzger
RY & CHEMIST
live Sts. St. Louis.



0 1 2 3 4 5 6 7 8 9 10

cm

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See *Tinus xiphoides* Meyer - H
 Ad. Hoenke Vol I. p. 143
Meyer. spec. Fuller
 caules ascendentes subflexuosi. erecti, recti
 foliis nodulosis leaves nodulosa
 anthers supradecompositi. simplex s. decomposita
 capitula paniculiformia multiflora (25-50)
 vix sessiles globosa
 stamens 6 dimidi perianthii longioria
 brevioria
 capsule contorta oblonga, oblonga
 mucronata mucronata
 perianthii dentes brevior
 perianthii longior dimidi bivalvis
 exserti trilocularis



0 1 2 3 4 5 6 7 8 9 10

cm

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Leitch & Corlies

DRUGGISTS

South West Corner Fifth and Market Streets.

9754

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0 1 2 3 4 5 6 7 8 9 10

cm

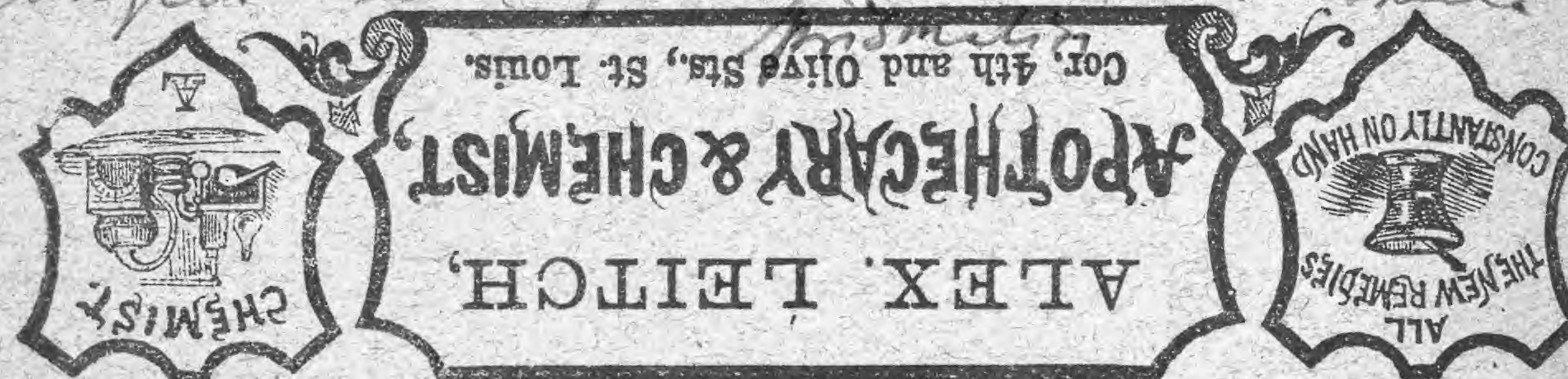
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major, fol. falcata
Californiæ type; panicula decurrens
staminæ septa dividit in superior
anthers. *Planchonæ aegyptiæ* s. plenior met
longior *capsula* *lambata* *monilis*.

Cor. 4th and Olive Sts., St. Louis.



Style interius brunnæ, obtusiora t. acutæ
scapus longæ - fl. longiora



0 1 2 3 4 5 6 7 8 9 10

cm

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I. x-phoenicea

cross sect of Culm
of leaves

length of culm

Phenomena

smaller form

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cm

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H. B. Bolander

Tamias

Aug 28 1866

Yosemite Valley Aug 1866

heads 15-30 flower



about 8 ribs

seed very unripe



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cm

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APOTHECARY & CHEMIST.**

Cor. 4th & Olive Sts., St. Louis.

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cm

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725-735

interrupted descent and ascent took place from January to December, we find in 1862 some interruptions in the steps of that ladder. The electricity in February, 1862, is about four degrees higher than that of January, April somewhat higher than March, and July is the lowest instead of September in 1861. These trifling irregularities may be accounted for by differences in temperature and relative humidity, and by a greater number of thunderstorms in 1862. January of 1862, for instance, was so unusually rainy, that its relative humidity too was unusually high, diminishing thus electricity. But the general features of distribution of electricity throughout the year are apparent in both years, and we may in that respect divide the twelve months of each year into two or three groups. Computing the months which give the highest electricity and those which give the lowest in each year, we find that in both years the months of January, February, March, April, November and December exhibit the highest, and the months of May, June, July, August, September and October the lowest electricity. The first group gives

The aggregate monthly mean of 71.5 degrees of electricity in 1861 and 74.6 " " 1862
While the second group gives 29.0 " " 1861 and 25.7 " " 1862

The command comes now to 1.11. from 1.1001. 7.1.



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cm

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WISLIZENUS—ATMOSPHERIC ELECTRICITY. 117

VI. The appearance of negative electricity was connected in

1861. No. times.	1862. No. times.	
30	32	with thunderstorms.
23	28	with rains without thunder and lightning.
20	4	with dry storms (without rain and without thunder and lightning).
4	3	with snow.
1	0	with fog.
78	67	

VII. *Relation of Rain and Snow to Electricity.*

Rain without thunderstorm was accompanied

	By Positive Electricity.		By Negative Electricity.		By no Electricity.	
	In 1861.	In 1862.	In 1861.	In 1862.	In 1861.	In 1862.
						0



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cm

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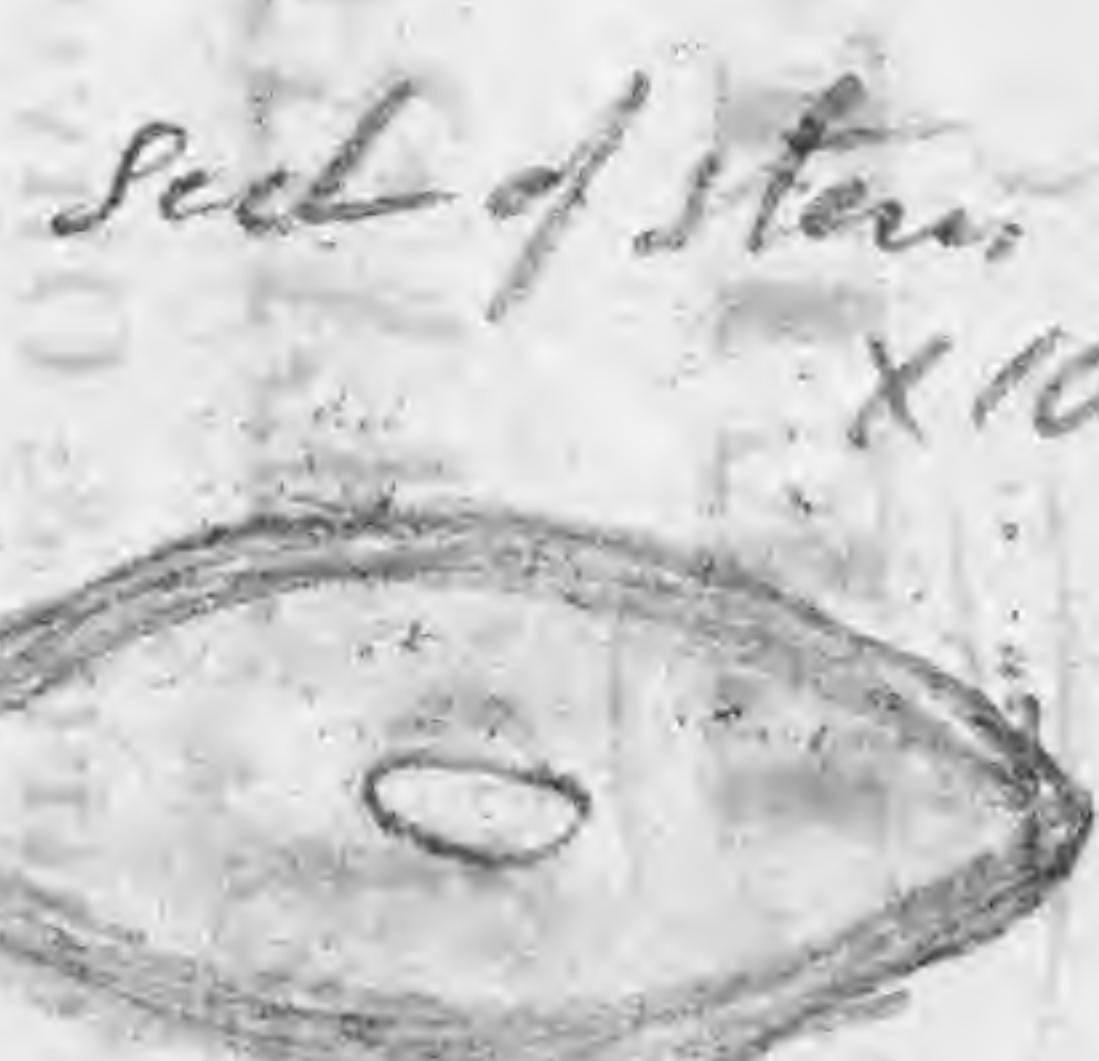
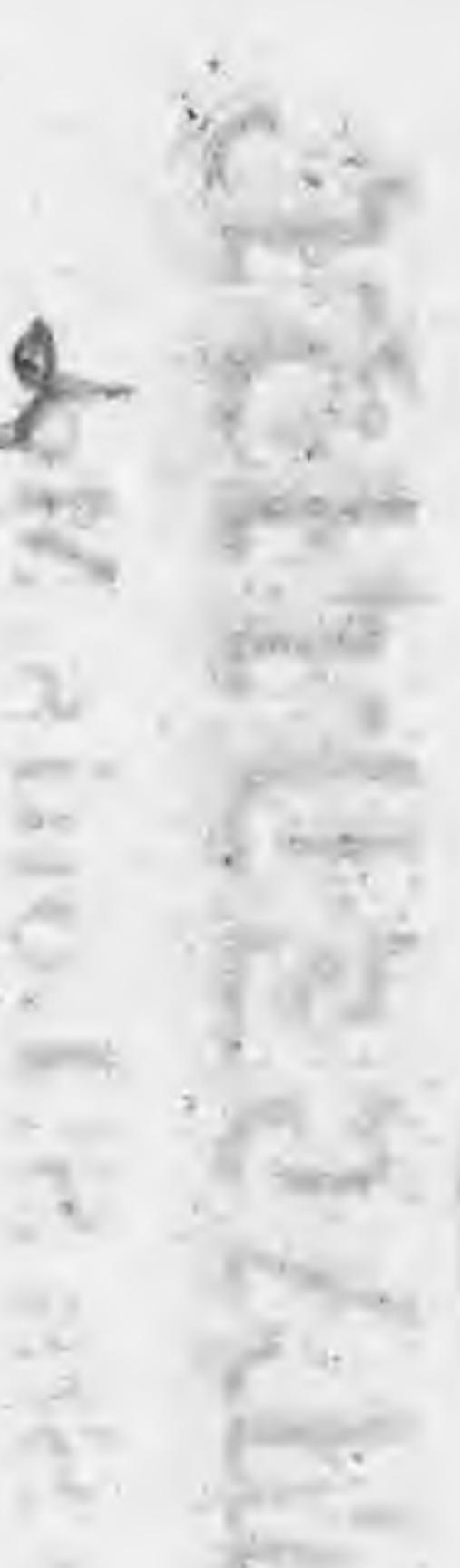
Finowia xiphioidea Eller Aug 13 1865
Santa Fe ^{g. mot. multiflor} Found No 358

heads 25-50 flowered

$\times 60$



seed
detached
below?.

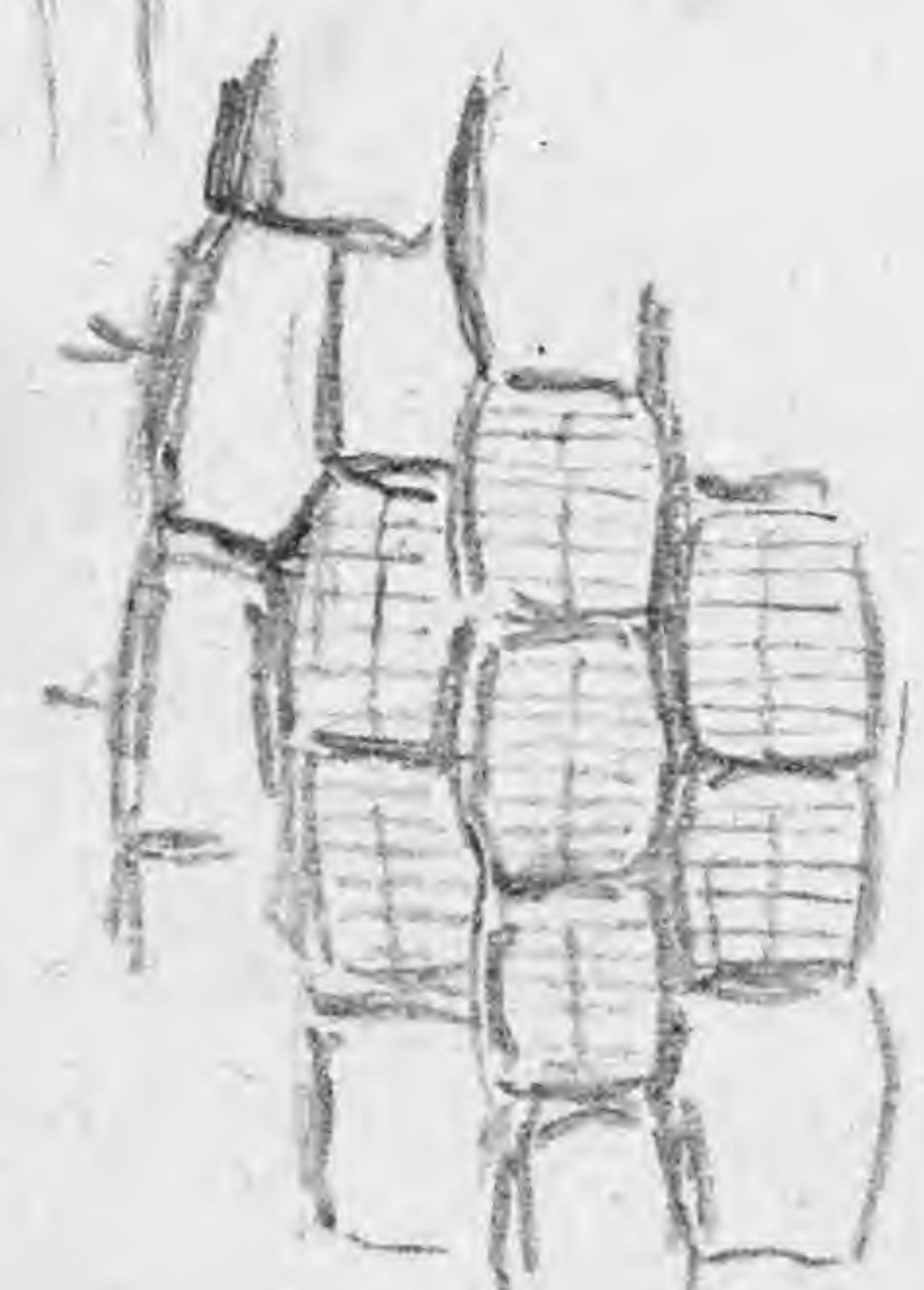


Small cavity

$\times 60$

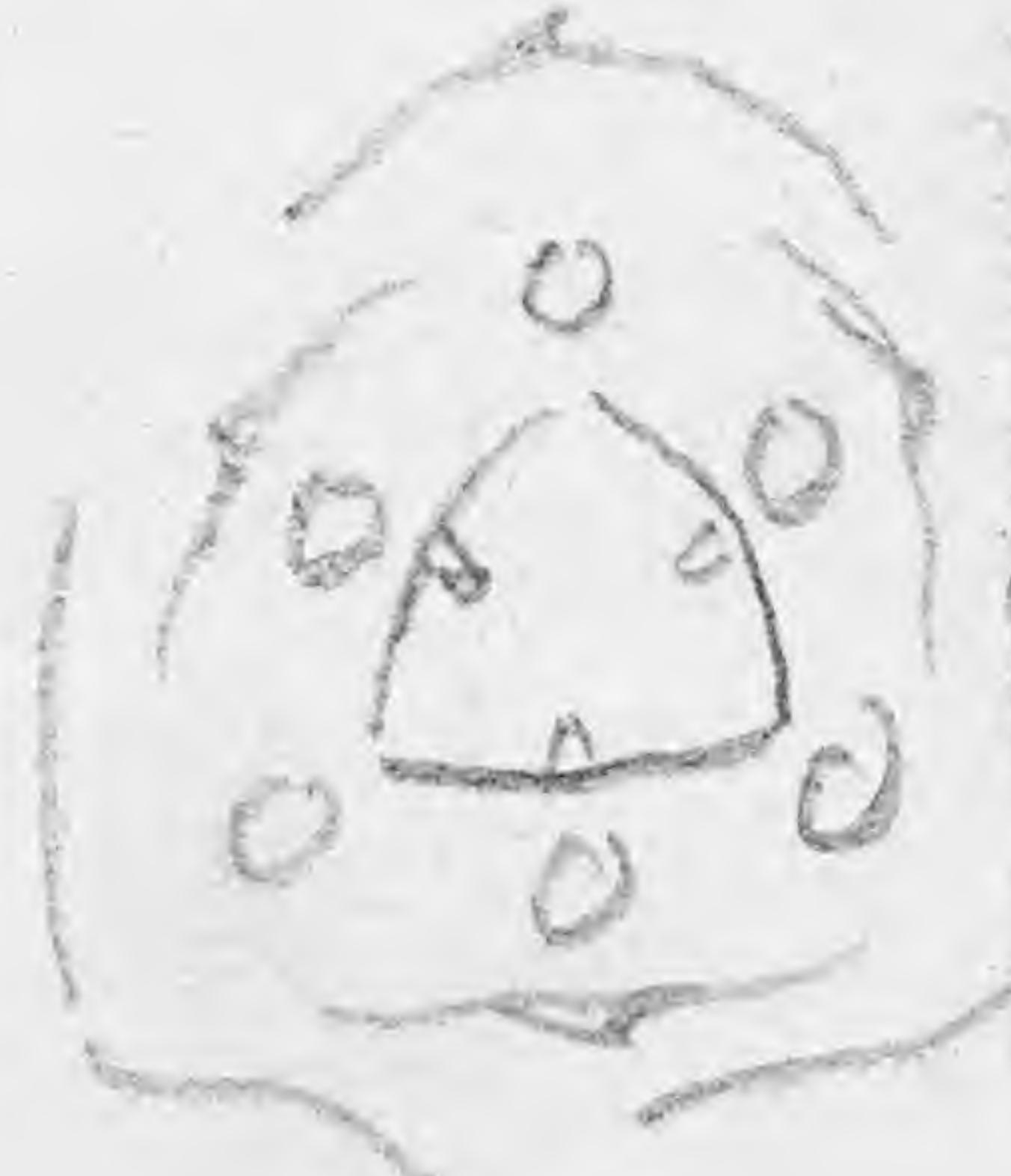


seed for capsule figure



$\times 150$

reticulation darker
surface of meshes distinctly striated



0

1

2

3

4

5

6

7

8

9

10

cm

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POST CARD & PHOTOGRAPH
M. Bldg. Cor. Fourth & Olive Sts. St. Louis, Mo.

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I. xiphoides s. montana 13 Aug 1865
P. Hall. 564 multiflora

$\times 6$

$\times 10$



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cm

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cm

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Oct 21 1865
Junc x joh g. morta planifl

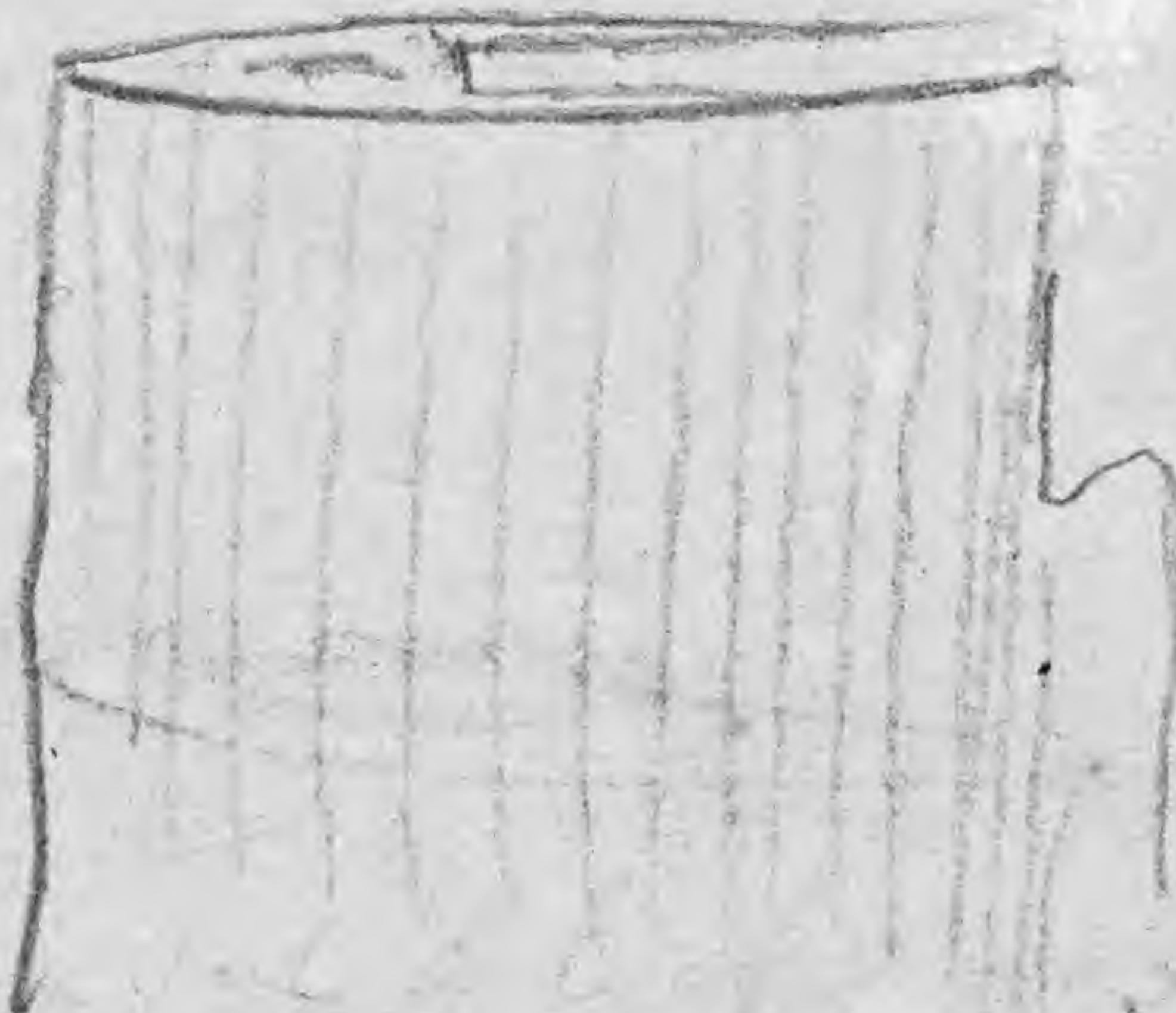
Wright. N Mex 1851 N. 1925-

ax Hg

capitl 12-18 fl



sepala
aegilopis
a subinervata



28 per



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cm

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Iomo xiphoides

Oct 21 1865

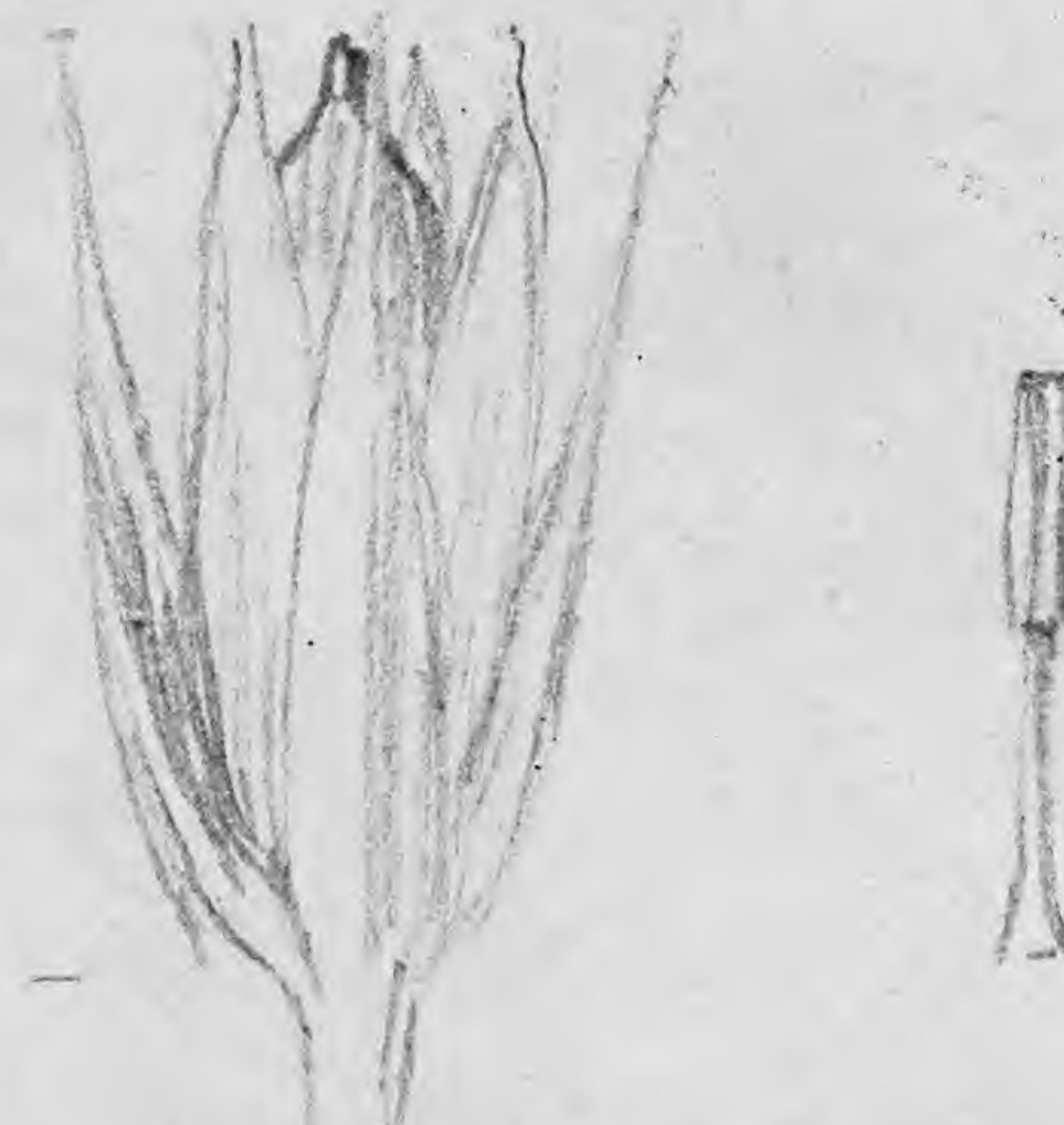
n. mota pl. flor.

Clear Water, Oregon Ad Spalding

ex H. C. Gray

(Paul Orville, Oregon, Dogall 1860. = H. Gray
sub nom. J. dilat.
is the same)

capit 6-10 flor.



side of leaf, no stipule.



side of base of stem
for this



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cm

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Dimorphothrix

Oct 21 1865

zeytinay paniciflora

wright N. Mex. 1851 No 1923 - part in Hb Short width
1923 - part in Hb Gray
mixed with *J. heteranthos*

capitule 5-8 flor

×60



×10



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cm

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Hegar & HARRIS
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cm

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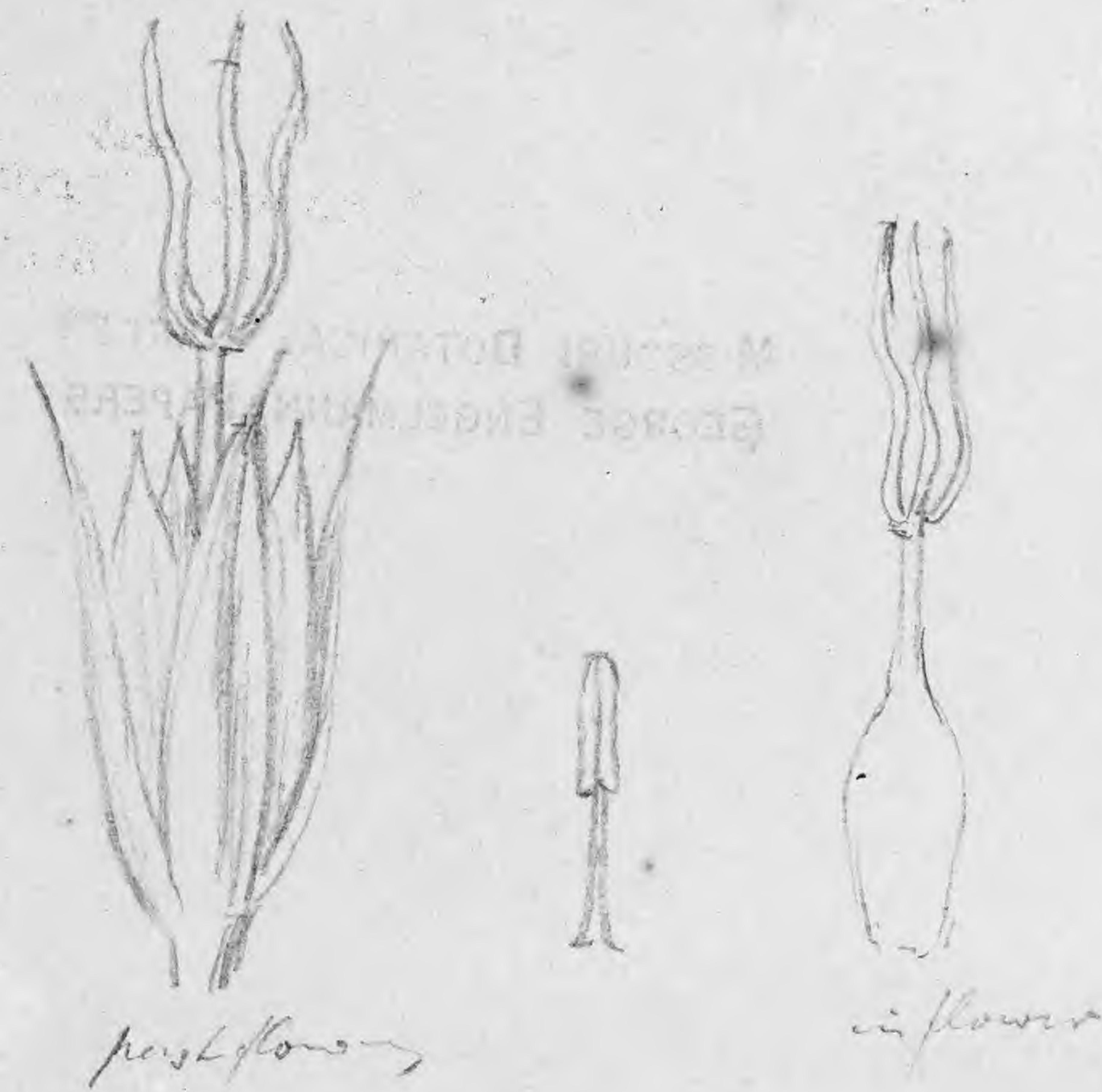


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J. Siphonodon p. montana ^{Oct 23 1865}
plumosa
Dumbarton Fork - Fort Riley, H. Engelm 1856

- Hb Gray

capit 10-15 ft



Long Creeping Arizona
no stipules or scarcely trace



0 1 2 3 4 5 6 7 8 9 10

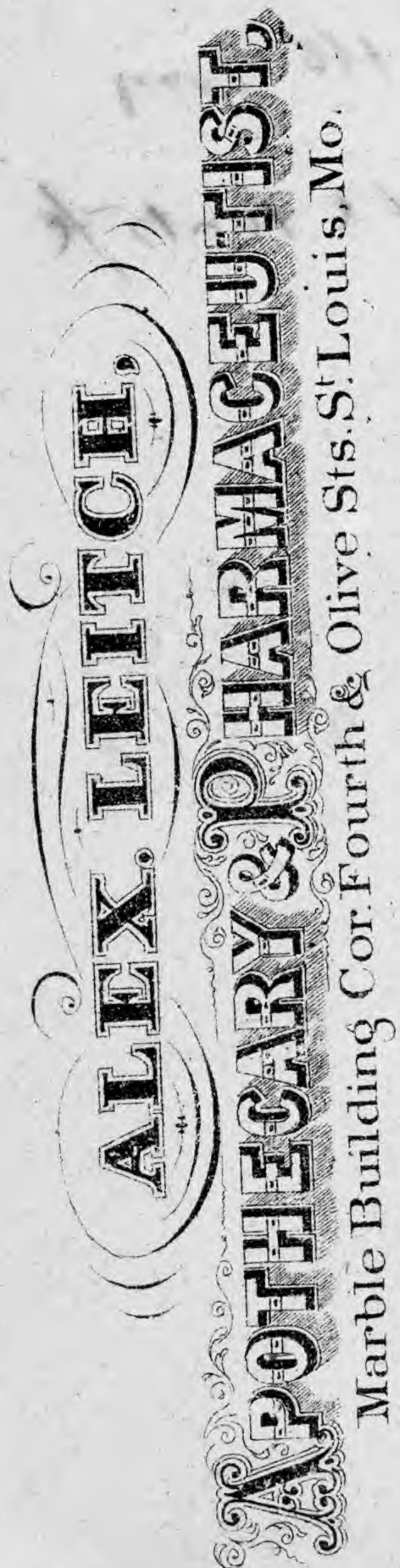
cm

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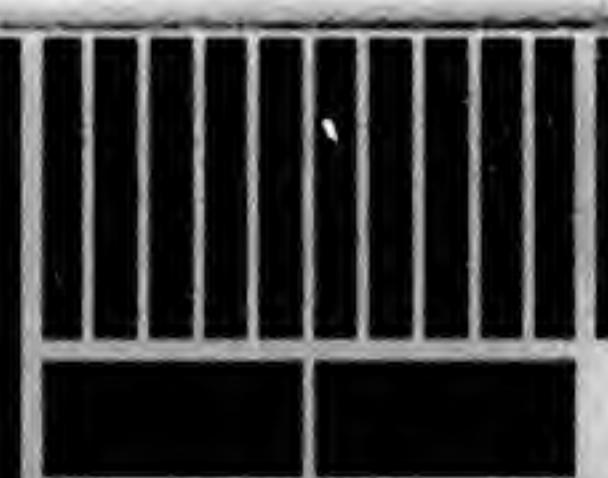
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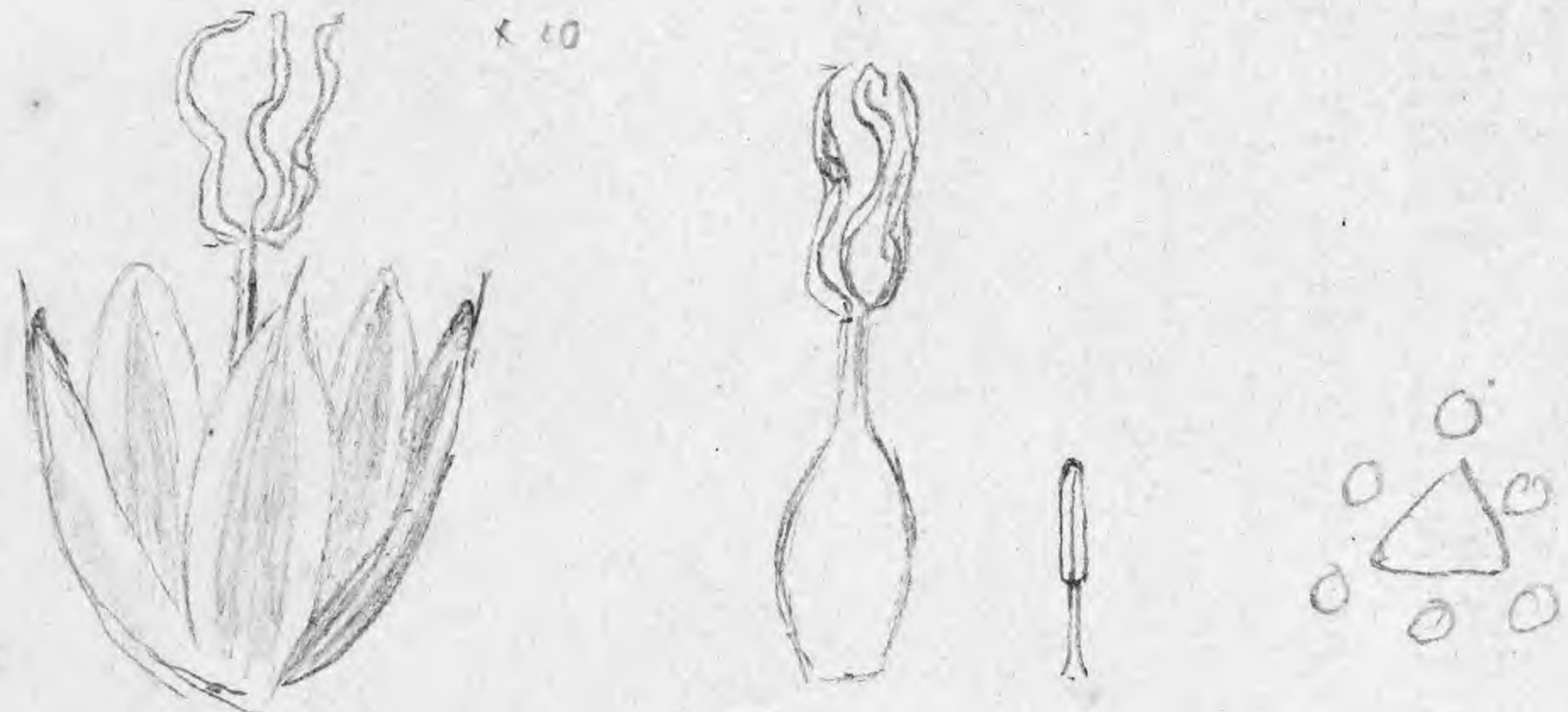
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Xiph??

Imperata xiph.
g. rotata paniciflora
"Lindheimer, Texas"

Oct 20 1865

Drawn from
an accurate drawing
?



sepulis squamis late membranaceis marginatis
altitudi exterioribus mucronatis;
interioribus obtusis. ^{ensatis?}
et hirsutis stolonibus repente pedatis, foliosus, foliis
panionula pallida; composita capitulis 5 floris;



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cm

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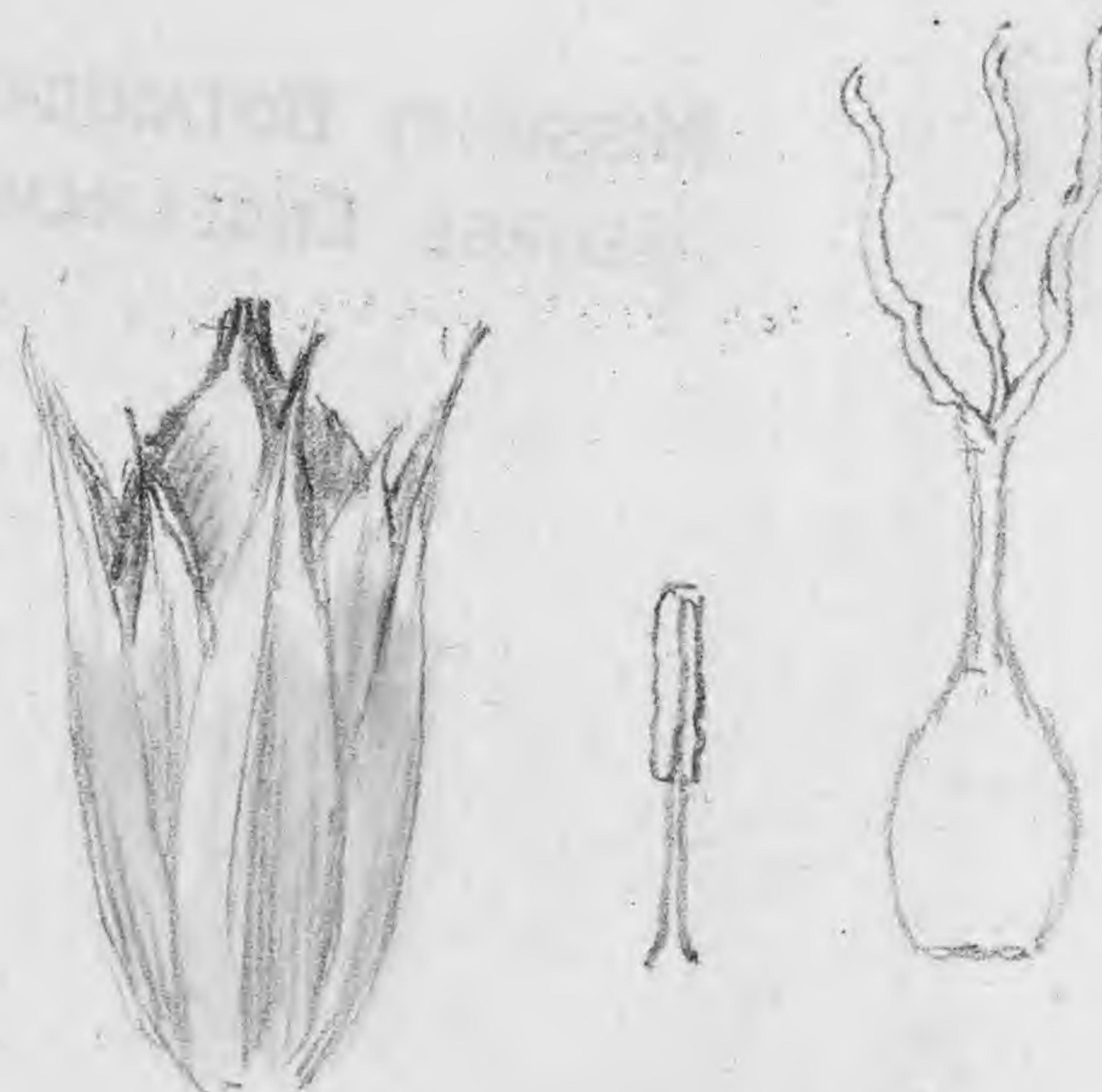
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Leptopholis g. montana ~~parviflora~~ April 24 1866
70 Fort Whipple, Arizona Dr. Caves & Palmer
1865

3 flower & head



very minute



0 1 2 3 4 5 6 7 8 9 10
cm

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APPRECIARY AND GENE MIST,

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ST. LOUIS, MO.

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0
cm

1

2

3

4

5

6

7

8

9

10

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var. montana fol angustioribus
minor) simplex 1. compitata randa
anthera filant aequalis 1. ex brevior
capsula obtusiusula sessilis
ovata -

spule nitens arida & plenaq. obtusus
pula brunn



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cm

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